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Connecticut Department of Environmental Protection

citizens' bulletin

Volume 6 Number 8 April 1979 $2/y

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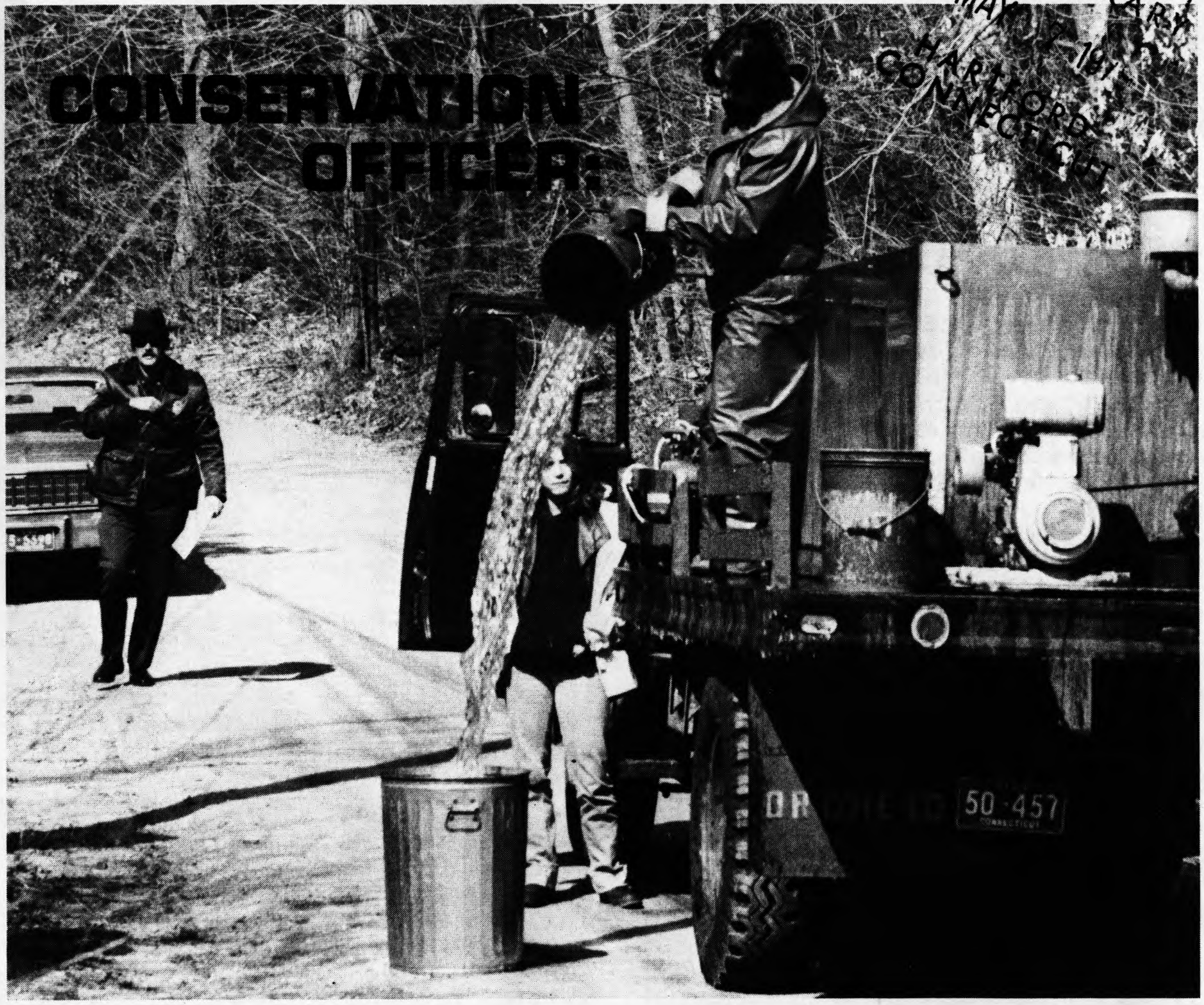

'PINCHING' POACHERS, STOCKING TROUT ARE JUST A FEW OF THE VARIED DUTIES

Inside *Park Purchase, 2; Conservation Officers, 3; Diary of a Young Trout, 9; 1978 Deer Harvest, 12; Appointments, 13; Public Participation Requirements, 14; N.Y. Water Quality Decision, 15; FYI: Workshops, ERT Funding, Closing Landfills, 16; CAM Legislation's Progress, 18; 208: Aquifer Protection, 19; Trailside Botanizing, 20.*

DEP Commissioner Stanley J. Pac was joined at the closing on the first parcel of land for the proposed Scantic River Valley State Park by: Sidney Sheptoff, one of the DEP land agents who negotiated the purchase and a member of the Department's Senior Environmental Employee (SEE) program (standing at left); State Representative Teresalee Bertinuson of East Windsor; State Senator Cornelius O'Leary of Windsor Locks; real estate broker Jack Pease; and Thomas Harrington and Elmer Riggott, owners of the seventy acre parcel of land in East Windsor.

STEP ONE:
Piecing Together A New Park

The Department of Environmental Protection acquired the first land for the proposed Scantic River Valley State Park at a formal closing on March 28. The seventy acre parcel in East Windsor was purchased from Thomas Harrington and Elmer Riggott for $98,140.

This acquisition is the first step in the development, as a State Park, of thirty-three miles of Scantic River riverway running from the Massachusetts line at Somers through Somers, Enfield, East Windsor, and South Windsor to the Connecticut River.

The park will be developed in an attempt to preserve the river valley as a natural and historic area in the face of advancing development. The corridor, which is "still relatively untouched and unspoiled," contains a number of historic sites, including mills and canals of the former Hazard Powder Company in Hazardville, according to Gordon Gibson, DEP Supervising Land Agent.

The park is expected to be used for "passive recreation" such as hiking when trails can be developed and for canoeing when the river can be cleaned up.

Acquisition of several more parcels is expected in the near future. One of these, a twenty-seven acre parcel, has been in one family for seven generations. The family is selling now, Gibson said, because they want to see the land preserved.

The total acquisition program is expected to cost $3 million or more, fifty percent of which is provided by Heritage Conservation and Recreation Service funding. A bill sponsored by State Senator Cornelius O'Leary, now before the State's General Assembly, would appropriate $1 million in State funds critical to continuing current acquisition efforts.

Gibson foresees eighty percent or more of the acquisitions being completed during the next two to three years.

According to Richard Clifford, Recreation Planner with the State's Parks and Recreation Unit, "Our overall objective is to acquire the entire Scantic River Valley in all four towns. We are, however, dealing strictly with willing sellers, and there are no condemnations involved in this program."

DEP Citizens' Bulletin
(USPS 041-570)

Published eleven times a year by the Department of Environmental Protection. Yearly subscription $2.00. 2nd class postage paid at Hartford, Connecticut. Funds are also provided through a federal grant from the Office of Coastal Zone Management under the Coastal Zone Management Act of 1972. Please forward any address change immediately.

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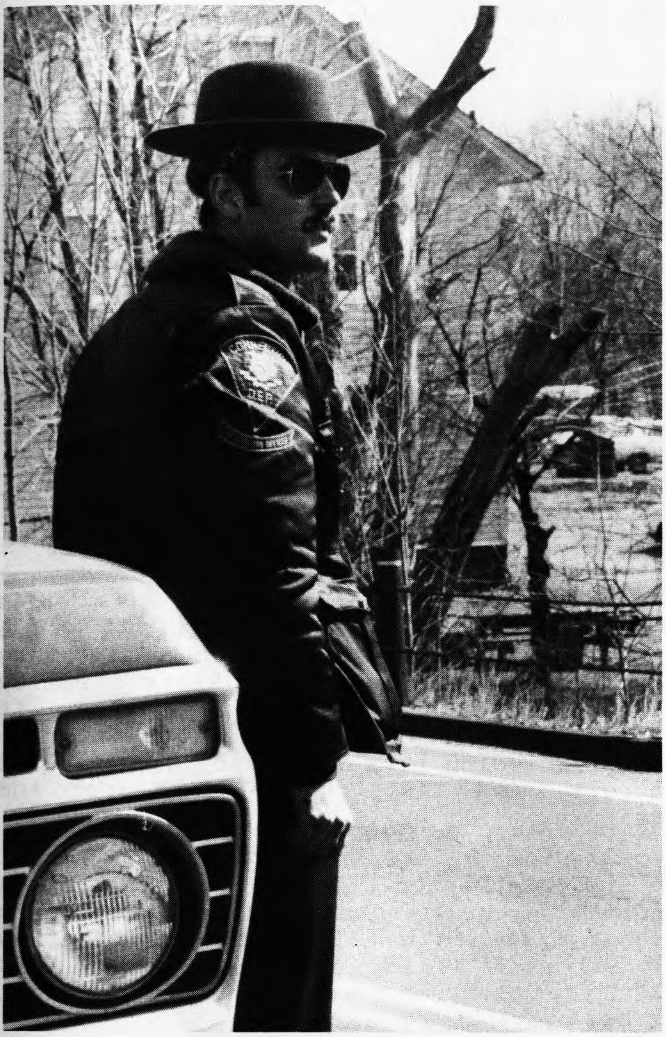
CONSERVATION OFFICER



MODEST PAY AND LIMITED PROSPECTS DON'T DETER APPLICANTS...

The salary is not generous. And the current career ladder provides few promotional opportunities. Nevertheless, hundreds of applicants would like to become Connecticut conservation officers.

Through June 30, 1979, the salary for Conservation Officer I (State salary grade 14) ranges from $10,835 to $13,223 after six years. This is four grades below State Police Trooper and three grades below DEP's park and forest unit managers, but it is expected that there will be some changes when the next union contract is negotiated this spring.

There is, according to Fred Pogmore, Chief of Law Enforcement for the Department of Environmental Protection, "very little promotional opportunity now available." There is one Conservation Officer II (a position comparable to a sergeant in a police department) in the State and a total of eight supervisory posts for the State's thirty-eight Grade I Conservation Officers to aspire to.

The last time the State exam for "Conservation Officer I" was offered, however, in December 1977, approximately 300 applicants took the test. Two were hired, and there are currently two vacancies in the force of 38 Grade I Conservation Officers.

The examination procedure for officers at entry level consists of four parts. An initial written examination tests candidates on knowledge of wildlife indigenous to the State of Connecticut. It tests on laws applying to fish, game, and boating -- at a level that should be known to sportsmen involved in these activities. It also tests abilities in verbal analysis and reading comprehension.

The second step, for those who pass the written exam, is an oral exam. About 75 candidates reached this stage the last time the exam was given. The oral examining board normally includes one professional police officer, either State or local; a DEP regional law enforcement supervisor; a chief of a natural resources department from another state; and a representative from the U.S. Fish and Wildlife Service.

The third step in the process of qualifying is a swimming test. Candidates must demonstrate ability to swim 75 yards. "We want," Pogmore says, "to make sure they could jump in and save someone, if necessary, since even officers assigned to inland areas may spend fifty percent of

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their work hours in a boat or in a water environment."

The final step is a State Health Department physical exam comparable to those given police officers.

Most of the successful candidates hired over the last five years have had degrees in wildlife management, law enforcement, or agriculture, but several have come out of the ranks of DEP's regional maintenance system.

New Conservation Officers are not normally assigned to areas where they reside when they are hired. An officer must establish his residence in the central part of the patrol area to which he is assigned.

A Conservation Officer receives a $30 a month allowance for maintaining an office at home; State-paid phone service; a radio-equipped car for business use; and whatever assortment of boats, pheasant trailers, etc., is necessary for performing his duties. Uniforms, rubber footwear, and foul weather gear are furnished, as is uniform maintenance.

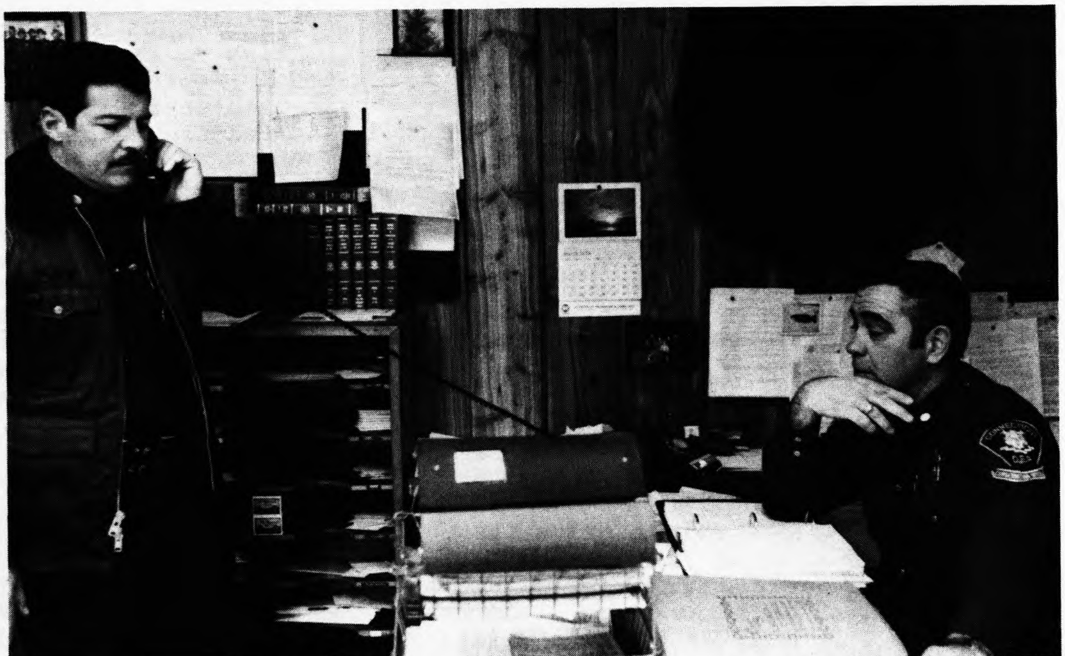
The officer normally works a 35-hour week with overtime for emergency situations. Many, in fact, split days and extend hours to accommodate the job's needs. Officers are listed in the DEP's "Abstract of Hunting, Trapping, and Sport Fishing Laws and Regulations," and thus are on 24-hour call.

Conservation Officers are the only environmental protection personnel who carry sidearms. Besides a 38 caliber revolver, Conservation Officers are issued 12-gauge shotguns and rifles, handcuffs, Mace, and "related enforcement equipment." They are required to qualify twice a year on the Standard Police Combat Pistol Course.

They must earn and maintain a Standard First Aid Certificate and are trained in CPR (cardiopulmonary resuscitation). Officers are expected to be able to operate boats -- including, in the shore region, larger craft.

Most new Conservation Officers spend their first six, probationary months working with an experienced officer. At the end of this period, during the slack period in late winter, if possible, they go through a twelve-week "Protective Services Training Course" at the Connecticut Police Academy. This course is given to all State officers, other than State Police troopers, who have full police powers. It stresses general law enforcement information including laws of arrest, mechanics of arrest, and restrictions on search and seizure.

Conservation Officers are responsible for all natural resource law enforcement in their areas -- usually four to eight towns -- as well as for assisting the State's Parks and Recreation personnel in the event



Conservation Officer Joseph Balint, left, responds to a call as Region III Law Enforcement Supervisor Donald DeBella looks on. Conservation Officers depend upon the public for information on violations. They also respond to public requests for assistance with sick, wounded, and unwelcome wildlife.

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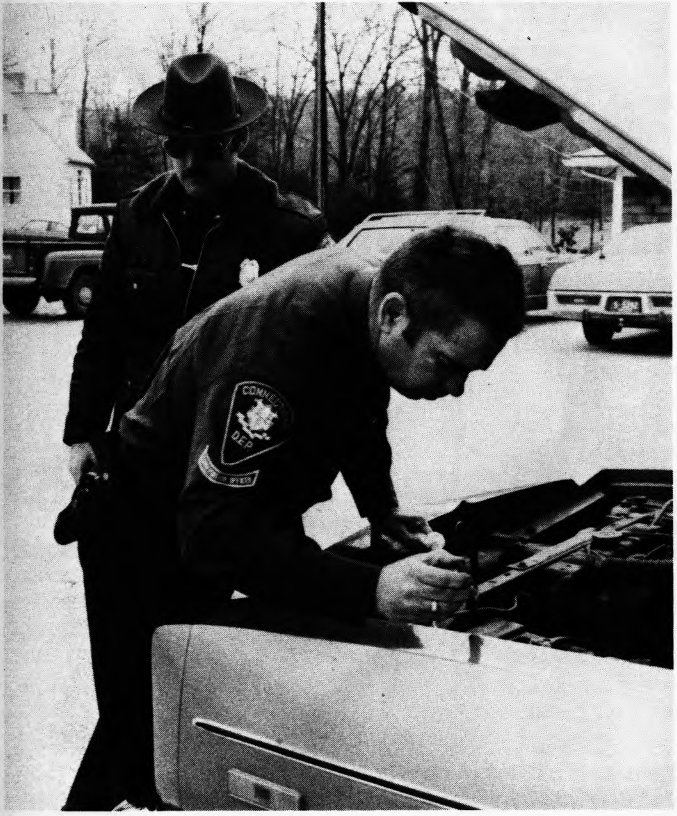
Conservation Officers are subject to monthly inspections of uniforms, weapons, and equipment. Above, Conservation Officer Frederick Ruhlemann empties his revolver for inspection by Law Enforcement Supervisor DeBella. Below DeBella checks Conservation Officer Henry Konow's vehicle. Vehicles and other necessary equipment are supplied to Conservation Officers.



of enforcement problems in parks or forests.

"Conservation Officer" is a rather different job today than it was a decade ago -- with increased emphasis on law enforcement. "In 1977, we became the primary police force for DEP's whole Division of Conservation and Preservation," Pogmore says. "When the Department of Environmental Protection was established, Conservation Officers' jobs were expanded to include enforcing laws dealing with boating, snowmobiles, and other recreational activities."

Before 1971, the Conservation Officer force averaged 400 to 500 arrests per year. Though there has been no large increase in officers, in fiscal 1978 arrests for wildlife violations (hunting, fishing, or trapping) alone numbered 1,400, and Conservation Officers made a total of 2,331 arrests. Fishing, followed by boating, infractions accounted for the largest numbers of these.

"We have," Pogmore says, "cut down on officers' maintenance responsibilities -- on their involvement in projects like planting food patches for wildlife. Today, many of these kinds of jobs are done by DEP maintainers, and many of the responsibilities for things like maintaining officers' cars and building pheasant crates and scraping vessels have been taken over by our field facilities."

Robert Buyak, Assistant Chief of Law Enforcement, offers some suggestions on how citizens can help their local conservation officers.

* Citizens who see illegal activities should act quickly. Notify the area conservation officer immediately.

* For your own safety, and so you don't scare off violators, do not confront the person or persons involved.

* Get all the information you can -- descriptions of person or persons, vehicle or boat registrations and descriptions and any other identifying marks, etc.

* Be alert for patterns of suspicious activities -- vehicles driving in fields, for example, or gunshots.

SUCCESSFUL CANDIDATES LAND A JOB 'FULL OF EXPERIENCES'

Conservation Officers don't only have to be familiar with the law and their territories and the habits of native wildlife; they also need a feel for the habits of local violators. "You'd be surprised," says Conservation Officer Henry Konow, "at this time of year, how many guys on their way to jobs that start at 7 a.m. stop off at streams for a few casts. Some of them carry their coolers so they can keep the catch till dinner."

So Konow plans some of his days, in the weeks just before fishing season, to start out early enough to check some of these early anglers.

One of the virtues of his job, says Konow, who's been a Conservation Officer for a little over two years, is the independence and initiative it requires. To underline this, he points out that his superior, Region III Law Enforcement Supervisor Don DeBella, supervises nine officers whose combined 1,500 square miles of territory extend from Long Island Sound to the Massachusetts border. Thus, Konow says, it's the officer himself who must know the needs and the problems of the towns in his area and must develop strategies for dealing with them.

Konow's territory runs along the Connecticut-Massachusetts line, covering the towns of Union, Somers, Stafford, Enfield, and part of Ellington. "I tell guys," he says, "that with one of me, covering 160 to 170 square miles, they're not very good at whatever they're doing if I catch them." As far as strategy goes, he says, "Since you can't be everywhere, you try to be seen around. And you depend upon reports from the public." Like other officers, Konow periodically speaks to various adult as well as school and scout groups, and he's encouraged that he's even had a poaching incident reported by one of the youngsters in one of his audiences.

Konow made 98 arrests in 1978 --the third highest number among the State's 47 officers and supervisors. But he points out that while Conservation Officers seek out violations, they have wide discretion to issue warnings rather than make arrests when the situation warrants. Sometimes, he says, the public just "doesn't know." His favorite example of this is an ice fisherman who arrived out of season and began drilling holes right in front of Konow's lakefront cottage.

Besides the independence, another attraction of his job is its variety, Konow

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says. One of the reasons is the changing seasons. In the spring there's fish stocking. In the high recreation periods of summer it's boating and other recreational law enforcement.

In the fall there's pheasant stocking and enforcement of hunting and trapping laws and regulations. After the end of hunting season, officers are involved with enforcing snowmobile laws and regulations and with chores like repairing wood duck boxes. Konow shows off a group of boxes on a lake in his area, saying, "They're all filled every summer." Many of them are, however, in the kinds of remote locations that call for a five-mile trek on snowshoes during the winter.

In Konow's case, the territory he covers is also varied. A recent fish stocking run took him from forest areas at the Stafford/Union line to a stream running along backyards in a new subdivision in Ellington and another close to the busy Enfield Mall.

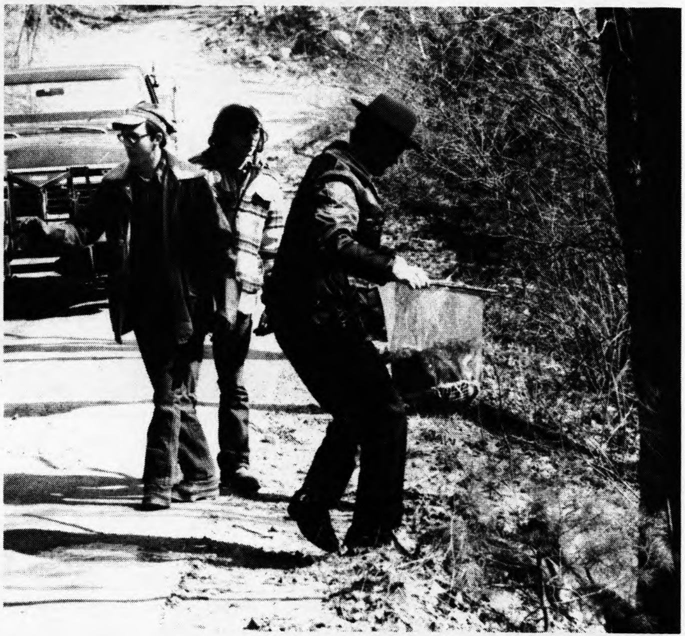
Konow escorted a fish hatchery tanker truck plus several maintenance staff members around the countryside to a dozen or more sections of stream that he had selected for stocking of trout. The following day, he said, he would be out early to see that pre-season anglers weren't beating legitimate fishermen to the two thousand or so fish that had been placed.

A day of fish stocking is a good example of the relatively placid end of the job. The day is clear and crisp, and the occasional onlooker is curious and friendly. At one point Konow checks the license plate of a familiar looking spectator who stops to watch: "I think I may have arrested him once." At another stop he chats with the homeowner whose yard provided the access to one stream. Good public relations, he stresses, is an important part of his job. At another stop he directs gawking motorists around the trucks as hatchery staff members net a few hundred more trout from the tanker.

To get an idea of the more exciting side of a Conservation Officer's work, he suggests you would have to follow an officer on a nighttime stakeout for deer poachers. He adds that the problems of deer jacklighting include not only loaded weapons but also the fact that a large percentage of these violators tend to also be intoxicated.

"You get called out in the middle of the night, and you never know what you're

Fish stocking is one of a Conservation Officer's responsibilities. The Officer is responsible for selecting stocking sites and for safe placement of thousands of trout stocked each spring. Above, Conservation Officer Konow supervises as Quinebaug Hatchery staffer Steven Keith, on truck, and Young Adult Conservation Corps member Pat Roireau, at rear, (They're also on the cover.) and maintainers Ron Jennings and Joe Perko, Jr., of the Shenipsit State Forest Headquarters prepare to stock a stream. Below, Konow does the honors as Perko and Jennings watch.



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going to run into. On jacklighting calls, an officer calls a neighboring officer to assist him. But because of the time factor, often you go alone with the other officer acting as backup. Then, sometimes, you get there and find nothing."

There are real potential dangers. Konow notes, however, that he has never had to draw his gun on anybody, and he thinks it's rare that fellow officers have to.

Besides the pressure of being on around-the-clock call, Conservation Officers have few two-day weekends and can plan to work, Konow says, Memorial Day and the Fourth of July and Labor Day -- as well as Thanksgiving which marks "the traditional start of poaching season."

Though there's less danger, citizens' calls for assistance, mainly with wounded or diseased or unwelcome wildlife, provide officers with a fair amount of excitement. "By the time they get to us, some of these callers are pretty hysterical," Konow says. He was summoned by one elderly woman who'd found a weasel "that had made itself pretty comfortable in her bed." He tracked a snake into a shoe in another caller's closet -- and was bitten by it. And he lured a skunk onto a board with an apple and carried it out of another caller's basement -- this last without event.

Konow has found that weapons qualification is useful since he's called on fairly frequently to shoot injured animals.

Officers are subjected, due to the nature of the job, to a certain amount of public harassment such as middle-of-the-night calls and fish heads on the lawn. Konow has found two dead raccoons, two dead possums, and one live snake in his mailbox. But the public has been far from all bad. One man helped him get his car out of the mud in the woods -- after Konow had arrested the man.

A hunter and fisherman himself, Konow adds, "In season I can't have much fun out fishing on my days off because somebody is always doing something illegal right in front of me."

The job makes a lot of demands. It can be pretty strenuous, for instance. "From now till fishing season, all I see are the soles of kids' tennis shoes running away from me," Konow says of his efforts to prevent pre-season fishing. He adds, "It's bad for your reputation if they outrun you and then spread it around that they got away." To keep in shape for chasing culprits through the woods, he runs two or three miles a day. Konow also points out that in some cases an officer may have to bring the arrestee out of the woods and then go back and haul out the carcass of the deer that was taken illegally. Because of the physical demands he thinks Conservation Officers should be given the same twenty-year retirement option that's given State Police officers.

The subject of monthly inspection of uniforms and haircuts and "brass" and weapons and cars produces the wistful observation that while Conservation Officers try to be as snappily turned out as State Police officers, "you get messed up running around the woods -- or falling into streams."

'FROM NOW TILL FISHING SEASON,
ALL I SEE ARE THE
SOLES OF KIDS TENNIS SHOES
RUNNING AWAY FROM ME.'

CONNECTICUT'S FISH HATCERIES
From Eggs to 'Catchable' Trout

Demands for fish -- and for fishing -- frequently outrun the natural productive potential of an area's waters. Artificial production of fish provides the remedy.

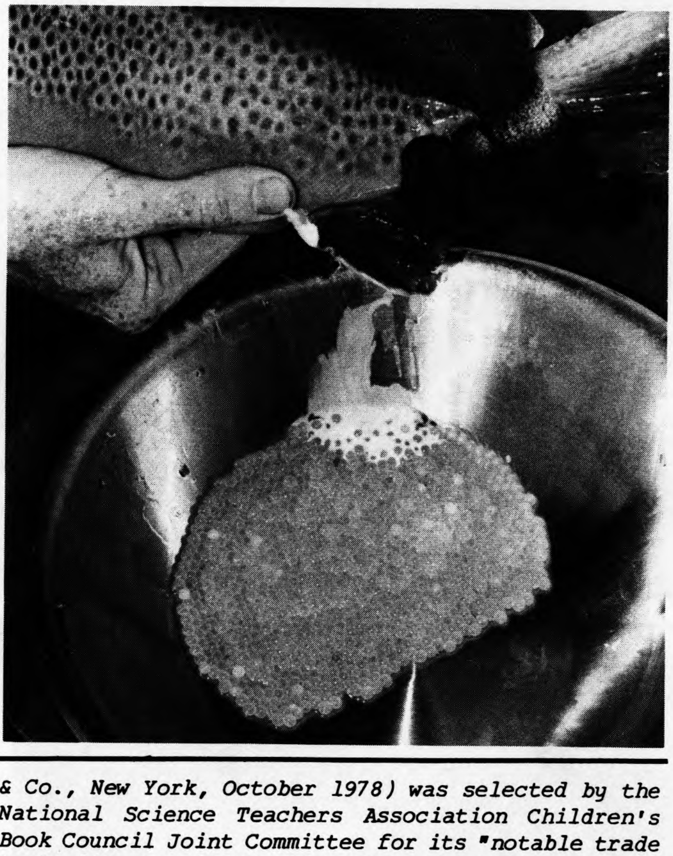
Simple forms of fish culture were developed by the ancient Chinese. Artificial spawning was, it is thought, first developed in the Fourteenth Century in France, though fish culture in the West didn't really get started until the Nineteenth Century.

Today the process is large scale, mechanized, and modern. The trout you take from a Connecticut lake or stream probably was spawned and spent his or her first eighteen months to two years eating his way to catchable size in one of Connecticut's three fish hatcheries -- at Burlington, Kensington, and Quinebaug Valley.

The hatcheries maintain a stock of mature brook fish, since young fish hatched from the eggs of hatchery brood stock generally do better in hatcheries than eggs taken from wild fish. The Quinebaug Hatchery, newest and largest of the State's three keeps, for example, about 3,500 brood trout, according to hatchery manager Michael Vernesoni.

Brood fish are eventually stocked into lakes and streams as they age and their fertility declines. This year about 4,000 surplus trout brood stock, some of them fish as large as ten or eleven pounds, will be stocked around the State.

Each October or November at Burlington and from August through October at the Quinebaug Hatchery, where artificial lighting hastens the spawning season of some fish, staff identify fish which are ready for spawning, aiming at the period of optimum fertility which lasts only about two weeks.


Spawning male trout

In the delicate spawning process, eggs are stripped from two or three female trout into a damp pan. A female brood trout may produce 500 to 3,500 eggs, depending on age, size, and species. According to Vernesoni, a rule of thumb the hatchery uses is to expect 1,000 eggs per pound of trout (roughly a fourteen inch fish).

Milt from a male trout is added, and, ideally, about ninety-eight percent of the 1/6 to 1/5 inch eggs are fertilized.

Photographs on this and the following pages are by Jerome Wexler. They are part of a series taken by him for A Fish Hatches, the latest of about twenty nature and science books for children, many of them award winners, which he has published. In December 1978, A Fish Hatches (text by Joanna Cole, photography by Jerome Wexler; published by William Morrow & Co., New York, October 1978) was selected by the National Science Teachers Association Children's Book Council Joint Committee for its "notable trade book" list for 1978 -- in other words, Wexler says, as "among the top one hundred children's books" marketed primarily to libraries and school libraries. The book retails for around $7.

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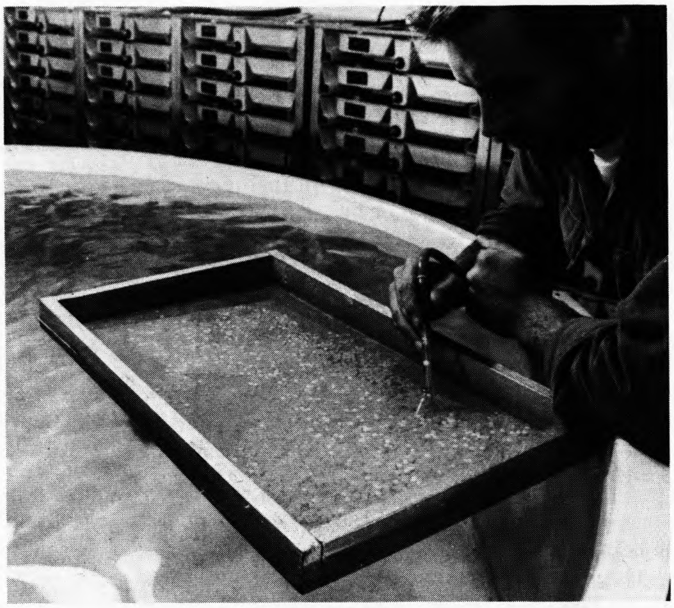
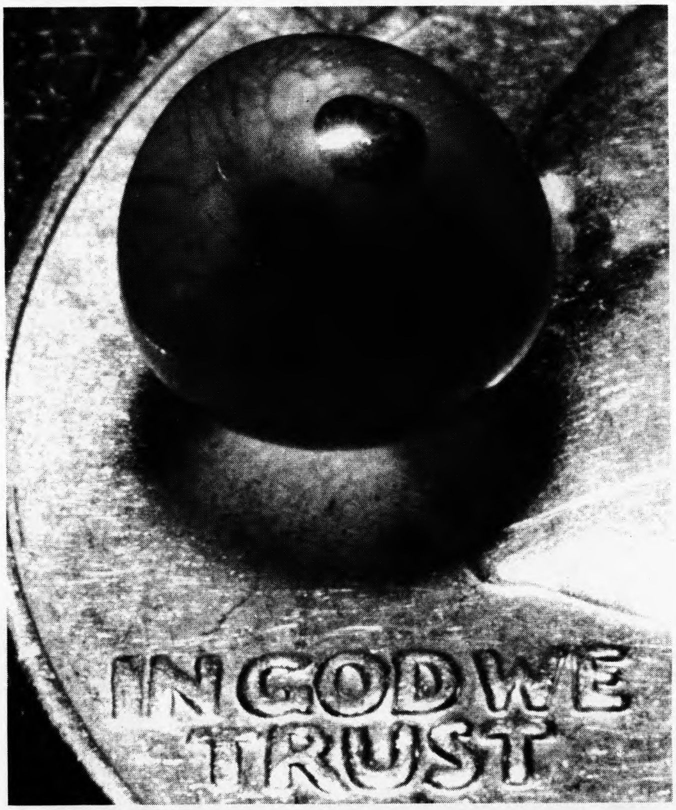
At first, the trout eggs are soft and "grapelike." After two or three hours they "water harden" and are placed in a hatchery incubator. Incubation takes a total of about 40 to 50 days, though this can vary widely depending on species and water temperatures.

After the first day or two, until the eggs reach what's called the "eyed stage" at somewhere between 20 and 40 days, even slight shocks can kill developing embryos. At intervals, dead eggs are carefully removed to prevent the development of fungus.



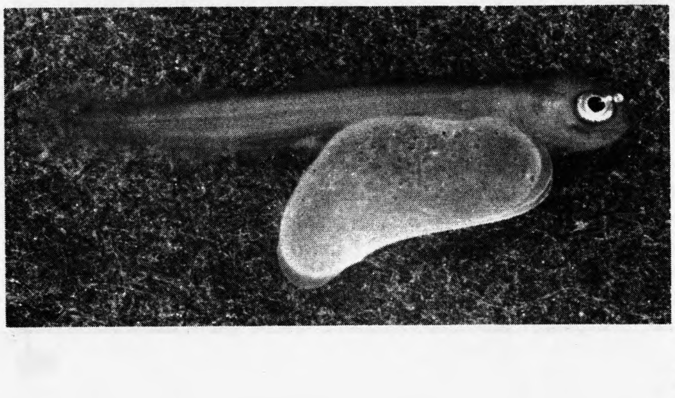
Removing dead eggs, incubator at rear



Eyed egg

After the pigmented eyes can be seen through the shell, eggs can stand rougher treatment, and it is at this stage that they can be successfully packed and shipped from place to place.

The eggs are incubated on mesh screens in trays provided with circulating 52° water. Quinebaug, one of the largest hatcheries in the East, can hatch approximately one and one-half million eggs at a time in its 120-tray incubator, according to Vernesoni. Burlington's incubation capacity is about one-third and Kensington's about one-fifth of Quinebaug's.



Sac fry

After 40 to 45 days of incubation, the delicate sac fry hatch, about .85 of an inch long on an average and weighing 1/4000 of a pound. The size of the newly hatched fish is directly proportional to the size of its egg. Yolk sacs are still attached to sac fry, and over the next 25 to 30 days the sac is absorbed while the fish's digestive system completes its development.

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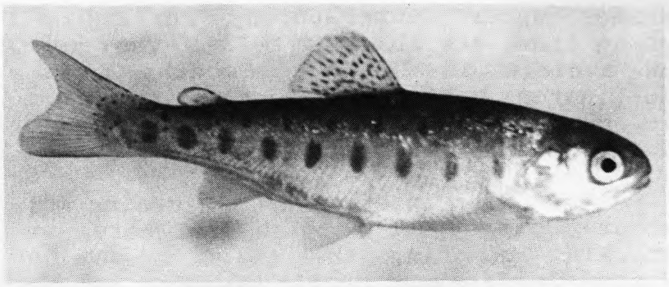
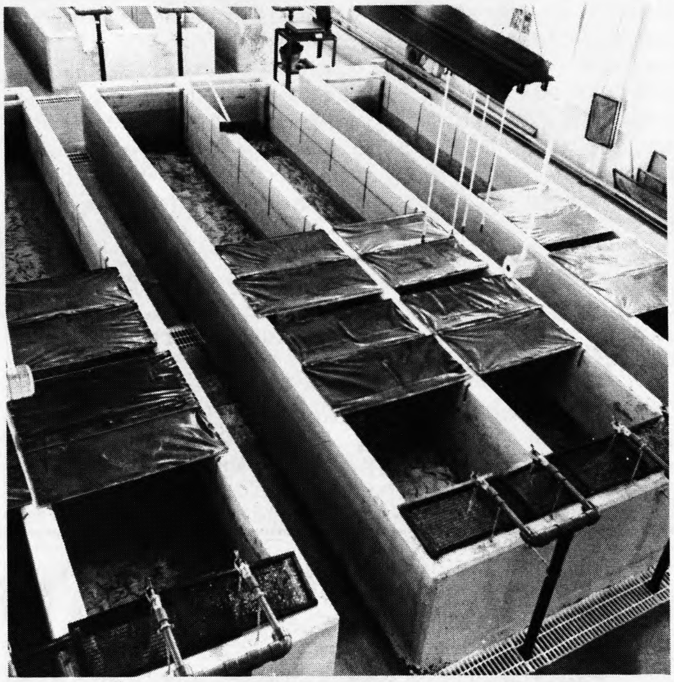
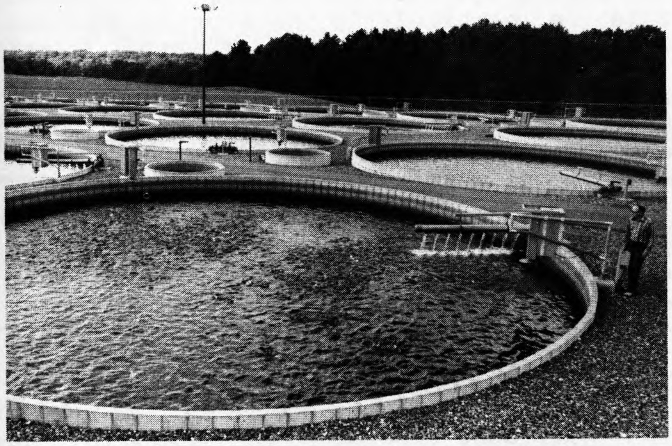
The most critical transition in the career of a young trout or other fish comes as the absorbtion of the yolk sac is completed. At this stage the fish, called an alevin, should begin to search for food and within several days must learn to eat. Once this is accomplished it can begin the serious business of growing to "catchable" size.


Alevin

After about two more weeks, the one-inch fish, now weighing about 1/2000 of a pound, is moved into a hatchway raceway or pool. Each of Quinebaug's 48 six-foot pools, for example, accommodate about 50,000 of these tiny trout. Automatic feeders at Quinebaug drop fine grains of high protein trout feed to the smallest fish every fifteen minutes, according to Quinebaug staff member Phyllis Kendrick. Larger fish get larger pellets at less frequent intervals -- every two hours for the biggest fish.


Raceway at Burlington


Quinebaug's ponds

At three to four inches, young trout are moved outside. At Quinebaug, Vernesoni says, they go out in March to one of 30 twenty-foot pools which can, altogether, accommodate 700,000 to 800,000 three to six inch fish.

By late summer, Quinebaug's young trout will be about six and one-half inches long. At this point they are graded for size and transferred to one of the hatchery's 40 fifty-foot ponds. Each of these can accommodate 15,000 or more nine- to eleven-inch, approximately seven-ounce fish.

Separation by size, Vernesoni says, is important because the larger fish are "more aggressive feeders." Batching allows smaller fish to grow more evenly. The pools of larger fish can be stocked first, come spring and stocking season, and the smaller fish can be held a few weeks longer.

The final step, stocking, comes about eighteen months after spawning for Quinebaug's and Kensington's trout. Because of a combination of colder winter and warmer

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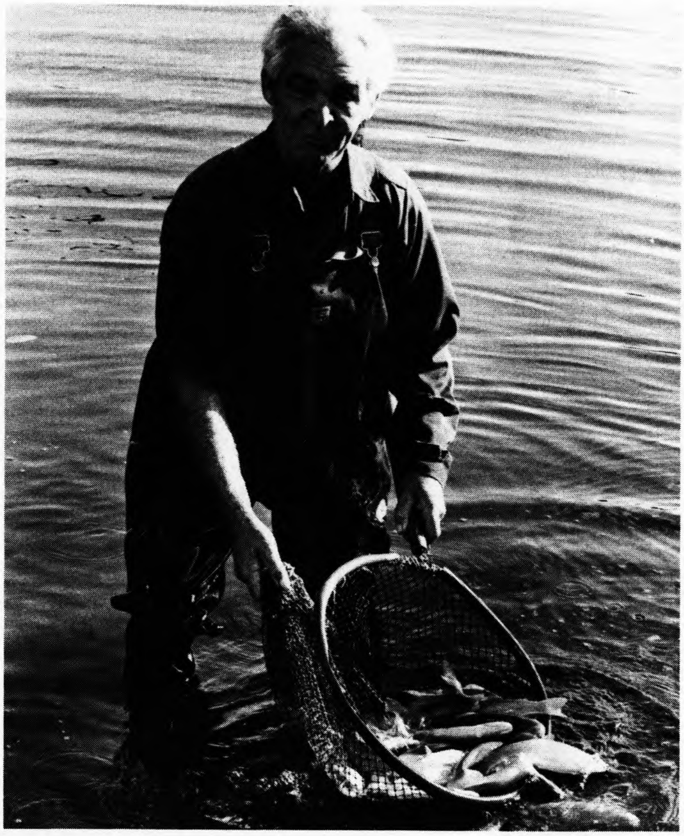
summer water temperatures, Burlington's young trout are slower growing. They spend an average of 28 to 30 months in the Burlington hatchery before being transferred, by hatchery tanker truck, to one of Connecticut's lakes or streams.

For those interested in learning more about Connecticut's fish hatchery and stocking program, the Quinebaug Valley Hatchery offers a public display section and three pools that are accessible to the public. It's open from 10 a.m. to 4 p.m., seven days a week, 365 days a year. Tours can be arranged through Michael Vernesoni (564-7542). Quinebaug's 1,200 acres also include two public fishing ponds and fishing in the Quinebaug River and the Moosup River. On the latter, a one and one-quarter mile area is set aside for fly fishing only.

The Kensington Hatchery is open from 8:30 a.m. to 4 p.m., seven days a week. Group tours can be arranged through manager, Warren Lesage (827-7785).

The Burlington Hatchery is also open 8:30 a.m. to 4 p.m., every day. Contact manager Joseph Holyst (673-2340) about group tours.



Winter of '78 Didn't Reduce Deer Harvest

Paul Herig, DEP's Deer Program Biologist, reports that the 1978 deer season harvest totalled 945 deer, approximately four percent more than the 909 reported in 1977.

Of the 945 deer, 128 were taken by archers, 230 by hunters with muzzleloaders, and 587 by hunters with shotguns. Compared to 1977 figures, the 1978 take by shotgun hunters declined approximately 11.3 percent, from 662 to 587. The deer taken by muzzleloader hunters increased from 118 to 230, or approximately ninety-five percent. Archers' success remained the most consistent with a decrease from 129 in 1977 to 128 this season.

The sex ratio of deer taken by both muzzleloader hunters and shotgun hunters was 1.2 bucks to one doe. The ratio for archers was two bucks to one doe.

Through all three seasons, approximately sixty-four percent of the deer were taken on state land, with the Pachaug and Natchaug State Forests ranked first and second for total reported take of 112 and 78 respectively. Salisbury and Sharon ranked first and second in hunting on private lands with 29 and 19 deer taken respectively.

"The percentage of yearlings in this year's take is almost exactly what it has been during the last two years," Herig said. "This is particularly noteworthy because these deer are last winter's fawns. If last winter's weather had noticeably affected this most sensitive segment of our deer herd, this year's yearling age group would have showed a decrease."

"The average weight and antler points of male yearlings, which are used as standard year-to-year comparisons, did reflect a seven pound loss and a .3 point decrease from the 1977 averages. The 1978 figures are almost identical to those for 1976," Herig said.

"With some reports still coming in," he noted, "the 1978 highway deer kill is presently at 1,054 deer. I expect the total will be over 1,100. For the four consecutive seasons that Connecticut has had deer hunting seasons, the highway kill has exceeded the hunting season totals."

"For the fourth consecutive year," Herig added, "there were no reported deer hunting related fatalities or even minor accidents."

DeCarli Sworn In As New Deputy Commissioner

On April 9 Governor Ella Grasso announced the appointment of Dennis P. DeCarli as the Department of Environmental Protection's Deputy Commissioner for Conservation and Preservation. The new Deputy Commissioner was sworn in by Assistant Attorney General Thomas Yasensky in a ceremony that day in the office of DEP Commissioner Stanley J. Pac.

DeCarli has worked with the State's wildlife program since October 1964 when he joined the Board of Fisheries and Game as a District Game Biologist. In 1969, he moved into the Hartford office as a Staff Game Biologist.

Under the new Department of Environmental Protection he was appointed Acting Chief of the Wildlife Unit in 1972. He was confirmed in that position, which he has held since, in 1973.

"Dennis DeCarli is a career State employee with a distinguished record of service in the field of wildlife and conservation," Governor Grasso said. "His dedication to public service and his commitment to meeting the environmental concerns of our State make him eminently qualified for the position of Deputy Commissioner," the Governor added.

A native of Springfield, Massachusetts, DeCarli graduated from Woodrow Wilson High School in Middletown. He received a Bachelor of Arts degree in zoology from the University of Connecticut in 1963.

DeCarli succeeds Theodore Bampton who had served as Deputy Commissioner since 1972. Bampton retired from State service April 1, 1979.

Administrative Assistant Named

DEP Commissioner Stanley J. Pac announced the appointment of Theodore C. Barbieri as administrative assistant to Deputy Commissioner for Conservation and Preservation Dennis P. DeCarli.

Barbieri, of Somers, spent over thirty years in his family's large wholesale and retail bakery business. For over twenty of these years he owned and managed the business which he sold in 1972 "to pursue a second career more closely related to a lifelong interest in hunting, fishing, and conservation."

From 1971 to 1977, Barbieri served as administrative assistant with the Kingfisher Division of the Garcia Corporation, one of the world's largest manufacturers of sporting equipment. His duties included extensive promotion and customer service as well as administration.

New Federal Regulations Assist Public Participation

By Tess Gutowski, Publicist, Water Compliance Unit

In mid-February 1979, new Federal Regulations were issued that were designed to "encourage, provide for, and assist public participation." All state projects that are financed by EPA and fall under the three federal programs -- The Clean Water Act, the Resource Conservation and Recovery Act, and the Safe Water Drinking Act -- must adhere to these new regulations. The publication of these regulations represents a concentrated effort by both the EPA and state agencies to facilitate "easy access" to the decision-making stages of a project.

DEP's Water Compliance Unit, which is responsible for water pollution abatement for the state, receives federal funding for its programs under the Clean Water Act. Once the Water Compliance Unit issues a polluter a State Order to clean up a water problem, a step that is a prerequisite to applying for a federal grant, citizen participation is expected to begin almost immediately. Depending upon the degree of complexity of a project, the regulations provide for two types of public involvement:

1. A Basic Public Participation Program -- "suitable for less complex projects with only moderate community impacts"
2. A Full-Scale Public Participation Program -- suitable for relatively complex projects with potentially significant community impacts

At a minimum, the Federal Regulations call for the following public participation activities:

<table>
<tr><th>Basic Program</th><th>Full-Scale Program</th></tr>
<tr><td colspan="2">Institute and maintain throughout the planning process a public information program</td></tr>
<tr><td colspan="2">Notify and consult with the public, during the development of the plan of study, about the nature and scope of the proposed facilities planning project</td></tr>
<tr><td colspan="2">Include in the plan of study a brief outline of the public participation program</td></tr>
<tr><td rowspan="2">Submit to EPA (within 45 days after the date of acceptance of Step 1 Grant Award) a brief Public Participation Work Plan</td><td>Establish an advisory group and a public participation coordinator</td></tr>
<tr><td>Submit to EPA (within 45 days after the date of acceptance of the Step 1 Grant Award), after consultation with the advisory group, a brief Public Participation Work Plan</td></tr>
<tr><td colspan="2">Consult with the public early in the facilities planning process when assessing the situation. Prepare/distribute a Responsiveness Summary</td></tr>
<tr><td colspan="2">Hold a public meeting when alternatives are largely developed but before an alternative or plan has been selected. Prepare/distribute a Responsiveness Summary</td></tr>
<tr><td colspan="2">Hold a public hearing prior to the final adoption of the facilities plan. Included in the final facility plan must be a final Responsiveness Summary</td></tr>
</table>

To p. 17

New York Decision Will Protect Connecticut Waters

A recent ruling will prohibit sewage disposal into New York State surface waters tributary to sources of public water supplies in Connecticut.

On January 23, 1979, Robert F. Flache, Commissioner of New York State's Department of Environmental Conservation, accepted the recommendations of a hearing examiner and agreed to the adoption by the State of New York of a new water quality standard (AA-Special) and the reclassification to "AA-Special" of all Westchester County surface waters tributary to sources of public water supplies in Connecticut.

Affected waters include tributaries to or parts of Converse Pond Brook, the Mianus River, the Rippowam River, the Five Mile River, and the Silvermine River. Connecticut has a blanket prohibition on disposal of sewage into surface waters in the watersheds of public water supply sources.

DEP Deputy Commissioner Melvin Schneidermeyer says, "I believe that this decision is the first such action where one state (Connecticut) has caused another to alter its water quality standards. In some other cases, states may have negotiated some of these questions, but we took issue with New York's standards and brought an administrative proceeding."

"We had," Schneidermeyer adds, "been attempting to negotiate this issue with New York since 1973. Prior to 1973 Connecticut officials felt an informal understanding had existed between the states."

The decision is in response to a petition by the State of Connecticut filed July 25, 1977. A series of public hearings resulted from the petition.

The decision relies upon a New York State regulation (6 NYCRR §701.2) which requires that discharges to immediate receiving waters be controlled to assure no contravention of higher water quality standards applicable to any downstream receiving waters. This requirement, according to the examiner, when read together with relevant provisions of the federal Clean Water Act -- which states that one state's water quality permits cannot contravene another state's water quality standards -- requires the conclusion that discharges to New York State waters may not cause or contribute to a degradation of downstream states' duly adopted water quality standards -- in this case those of Connecticut.

A major consideration was the fact that some contaminants (specifically viruses) are not subject to standard analytical procedures. Others (exotic chemicals and various carcinogens) can be identified only by using time consuming and sophisticated tests which can only be applied on a limited basis.

The examiner quoted testimony from the Connecticut DEP in writing, "It is felt that the discharge of sewage or waste effluents to surface waters used for drinking water purposes is a serious and unnecessary public health risk due to the potential for the transmission of waterborne disease of microbiological origin or the potential discharge of chemical contaminants which may not or cannot be controlled to levels which are known to be safe."

Among the hearing officer's other findings:

* No existing New York State standard imposes "an absolute restriction on discharge of sewage . . ."

* The State of Connecticut has determined what constitutes water quality and pollution of waters for its purposes, and Connecticut's request to the State of New York would allow those waters flowing into Connecticut from New York to be preserved and protected consistent with Connecticut water quality criteria.

* The change in the standard also protects New York State uses of these waters.

* In the past New York State has protected certain lakes within the State by the use of an "AA-Special" classification.

* The proposed standard and class applies only to a limited number of surface waters within one area within one drainage basin. The new standards will not change existing uses in either State with the exception of two minor dischargers revealed during the hearing proceedings.

* In this specific case, it was determined that current economic impact of such a decision will not be appreciable and future economic impact should not be unreasonable.

For Your Information

CACIWC Chapter Offers Workshop

By Martina Delaney

The Hartford County Association of Conservation and Inland Wetlands Commissions (HCACIWC), a regional chapter of the Connecticut Association of Conservation and Inland Wetlands Commissions (CACIWC), is hosting a potpourri workshop on Wednesday, May 23. The evening of information and education will be geared to new and veteran conservation and inland wetlands commission members. There is no admission fee, and you need not belong to the Association to attend.

"Open Space," "Documentary Case Studies," "Soil Erosion and Sedimentation Control," and "The Outdoor Classroom" are the topics to be discussed in depth by guest speakers, Jack Gunther, President of the New Canaan Land Trust; Attorney Robert Fried; Vern Anderson, Hartford County SCS District Conservationist; and Steve Fish, Assistant Director of DEP's Information and Education Unit.

The potpourri workshop will begin at 7:30 p.m. at the Agricultural Extension Service, 1280 Asylum Avenue, Hartford. For more information contact Mary Dishaw, 653-6188, or Harry Spring, 677-2733.

Support ERT Appropriation

The purpose of an Environmental Review Team (ERT) is to provide local decision makers and developers with natural resource data and interpretation which will foster environmental quality and improve the long-term economics of land use (see February issue).

To date, only part of Connecticut is covered by this program. About sixty towns in southwestern Connecticut and along the State's central corridor are not included in the Eastern Connecticut or King's Mark Resource Conservation and Development areas which provide the service.

A bill to appropriate funds for the expansion of the ERT program to cover the whole State has been introduced in the current session of the General Assembly by the environment committee.

The hearing on the bill has been held, but written comments can still play an important part in supporting the program's expansion. People wishing to support H.B. 7727 can do so by writing to their State Senator or Representative or to the Appropriations Committee (Room 308-312, State Capitol, Hartford, CT 06115).

Citizen Participation Coordinator Ellen Frye, who has been the regular author of this column, left DEP in February for Cambridge, Massachusetts. On March 25, she and her husband Bill Mitropoulos became the parents of a baby boy.

Solid Waste Subject of Conference

A major conference on solid waste management has been scheduled for Tuesday, May 8, 1979, from 9 a.m. to 4 p.m. at the Lincoln Theater, University of Hartford campus on Bloomfield Avenue, West Hartford.

Sponsored by DEP's Solid Waste Management Unit, the conference is intended to provide a comprehensive look at the problems of solid waste disposal, the department's statutory responsibilities, and the various viewpoints concerning the best methods of dealing with the problems.

Commissioner Stanley J. Pac, Deputy Commissioner Melvin J. Schneidermeyer, and Solid Waste Management Unit Director Charles Kurker will provide a welcome and an overview of the solid waste problem, and a basic look at the department's responsibilities.

Representatives of the Water Compliance and Solid Waste Management Units will provide detailed information about their units' statutory responsibilities.

Kent First Selectman Eugene O'Meara and Hartford City Manager John Sulik will represent the viewpoints of small and large communities, respectively.

Hugo Thomas, Director of DEP's Natural Resources Center, will discuss methodology for siting landfills in Connecticut, and Russell Brenneman, President of the Connecticut Resources Recovery Authority, will discuss that agency's role in the overall solid waste situation.

The bulk of the afternoon session will be devoted to a panel discussion of the various viewpoints concerning solid waste management. Panel members will represent federal and state government, individual citizens, and directly involved industry. Carroll J. Hughes will serve as moderator of the panel discussion.

Panelists will include Dennis Heubner, Chief, Solid Waste Management Branch - Categorical Programs Division, Region I, U.S. Environmental Protection Agency; Honorable John W. Anderson, House Chairman, Environment Committe, Connecticut General Assembly; Kathleen Golas, Solid Waste Specialist, League of Women Voters of Connecticut, Inc., and member of Connecticut Solid Waste Management Advisory Council; Joseph C. Swirsky, President, Connecticut Paper Corporation; Leonard Harrington, Plant Engineer, Kendall Fiber Products Division; and Joseph Boren, Vice President for Development and Municipal Services, Connecticut Resources Recovery Authority.

'Dumping' Your Dump Is Not Cheap

By John England, Senior Environmental Analyst, Solid Waste Management Unit

As with everything else related to construction, the costs of grading, final cover, and closing of landfills has increased significantly over the past few years. The major steps generally involved in a closure are: engineering and preparation of final contour maps, construction (regrading and soil application), purchase of two feet of final cover soil, seeding, and in some cases drainage changes for leachate abatement purposes.

The costs involved in closure can be a significant budget item for any town or city. With several dozen landfills in Connecticut expected to close in the next few years, towns should anticipate large expenditures. Also, with the increase in closure costs, use of a phased closure operational plan becomes more important to make final cover expenditures part of the yearly operating budget.

Nine municipal solid waste disposal areas in Connecticut, ranging from one and one-half to over 100 acres, have initiated or completed closure within the past year.

Total actual or estimated closure costs range from a low of $35,000 to a high of $5.1 million. For comparative purposes the cost per acre of landfill area was calculated. The cost-per-acre ranges from $6,200 to $51,000.

The highest cost closing, an estimated $5.1 million or $51,000 per acre, applies to a 100-acre site in Milford that is being closed and developed as a State park. Work at the site includes extensive regrading, construction of a temporary access road, gas venting, leachate monitoring, landscaping, and two or more feet of final cover soil.

The next highest cost per acre was $27,000. As a rule of thumb, an average cost of $10,000 to $12,000 per acre for grading, covering (with purchased off-site soil), and seeding appears reasonable. Any other special site problems such as storm water drainage modifications, leachate pollution, water quality monitoring, or erosion can add to this base figure.

Session Explores 'State of the Sound'

Saturday, May 19, has been set as the date for a State of the Sound Conference to be held at the University of Bridgeport Student Center. Participating in the panel discussions will be scientists from around Long Island Sound as well as policy-management persons.

The day-long session, incorporating the Long Island Sound Conference, is being co-sponsored by the Long Island Sound Taskforce, its parent organization the Oceanic Society, and the University of Bridgeport.

For further information on the May 19 conference, contact Suzi Wilkins, Long Island Sound Taskforce, (203) 327-9786.

Federal Participation Requirements

From p. 14

Advisory Groups, which are required for full-scale public participation programs, are important for the input/feedback they provide to the agency and decision-making officials on significant issues. Responsiveness Summaries will give the EPA and the public a chance to review public participation activity to date and provide a forum for public comment.

The EPA will evaluate each federally funded state project's public participation program and will decide whether or not the requirements have been met. Should the program be found deficient, the EPA will withhold all financial assistance for the project.

The regulations are there; it's up to the public to effectively use them. Additional information concerning the public participation regulations may be obtained by writing or calling: Tess Gutowski, Publicist, Water Compliance Unit, State Office Building, Hartford, CT 06115 (566-2588).

coastal
area
management
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CAM NEWS

Committees Act on Coastal Management

By David Tedone, Public Participation Assistant

The 1979 Coastal Management Bill has been reported out of committee and is on its way to the House floor. House Bill 7878, An Act Concerning Coastal Management, was given "joint favorable" reports by the Environment Committee on April 2, and by the Planning and Development Committee on April 11. The action is the culmination of over two years of legislative effort on the bill.

The bill is based on findings of the Legislature's Interim Study Committee and incorporates the recommendations of the CAM Advisory Board, an alternate approach prepared by the Study Committee, and public testimonies heard at ten public meetings last fall.

Six legislative hearings were held by the Environment Committee in March on House Bill 7878. Significant local support was offered by coastal towns, and several major State agencies and coastal regional planning agencies expressed strong approval. Various interest groups including the Connecticut Marine Trades Association, the Connecticut Conference of Municipalities, the League of Women Voters, and the major environmental groups also voiced strong support.

The basic goal of the bill is to balance the need for continued economic development with the need to protect or preserve valuable and irreplaceable coastal resources. The key to the management technique is creating a strong municipal and state partnership. Some major features of House Bill 7878 are as follows:

* Coastal municipalities are given the added authority, through existing planning and zoning, to evaluate the impacts of development on coastal resources by conducting a site plan review.

* Statewide policies are provided to guide municipal, State, and federal permit decisions affecting the coastal area. The policies are flexible enough to allow local application while providing enough uniformity to reduce conflicts among municipal, State, and federal governments.

* DEP is required to simplify the permit system for both State and federal coastal regulatory programs. Such simplification has already been achieved in other states with approved coastal management programs.

* DEP is required to provide continuing technical and financial assistance to coastal municipalities. The funding formula contained in House Bill 7878 guarantees adequate funding for towns to implement coastal management.

* Municipalities are given a formal role, if they wish it, in DEP permit proceedings within the coastal boundary.

The Coastal Management Bill, if enacted, will provide Connecticut with a coastal management program that does not require new permits or new regulatory programs. In fact, it will preserve existing regulatory jurisdictions while increasing municipal authority through planning and zoning, requiring DEP to simplify federal and State permit procedures, and providing statewide policies for overall guidance. The bill is drafted to meet federal approval requirements for the continued funding necessary for program implementation.

David Tedone

208
WATER QUALITY
MANAGEMENT

209 COURT ST., MIDDLETOWN, CT. 06457 347-3700
By Joseph M. Rinaldi, 208 Public Participation Assistant

Protecting the State's Aquifers

About 15,000 years ago, at the end of the Pleistocene Epoch, the last glaciers retreated from Connecticut. As the glaciers receded, their melt-waters deposited layers of sand, silt, clay, and gravel in the river valleys of the State. These deposits, known as stratified drift, are important aquifers, and many are now used for public and industrial water supplies. The coarse-grained sand and gravel deposits are the most favorable aquifers and have been mapped by the Department of Environmental Protection in cooperation with the U.S. Geological Survey.

In the past, streams and reservoirs have supplied most of Connecticut's water needs. However, land available for additional reservoirs is scarce and increasingly expensive. Furthermore, turbidity standards set by the federal Safe Drinking Water Act must shortly be complied with, and as a result some communities are faced with the prospect of either constructing expensive filtration plants or developing a supply system which utilizes ground water. In effect, ground water may prove to be the most cost-effective future water supply source.

Some of the major stratified drift aquifers, however, may never be used for water supply because they are already contaminated. The U.S. Geological Survey, under contract to the Connecticut 208 Program, has mapped areas where ground water is impaired, contaminated, or threatened with contamination from non-point sources of pollution. Coarse-grained stratified drift deposits are particularly susceptible to contamination because they are desirable locations for urban and industrial development.

In order to ensure that the quality of ground water in stratified drift aquifers will be acceptable for its intended use, the Connecticut 208 Program is working to develop ground water protection and management plans. These plans include the identification of critical stratified drift aquifers in the State. Three categories of critical aquifers have been identified by state, regional, and local agencies. They are:

A) those aquifers now being used for public water supply,

B) those aquifers anticipated to be needed for public water supply in the next 20 years, and

C) potential high-yield aquifers that are presently uncontaminated but for which no immediate need has been identified.

To adequately protect these critical aquifers it is essential to recognize that they can receive water, hence contamination, in three ways:

1) from precipitation over and infiltration into the aquifer itself,

2) from ground water movement from adjacent upland areas into the aquifer, and

3) indirectly, from streams that flow over the aquifer. Most stratified drift aquifers are in hydraulic connection with surface water. Under normal conditions water moves from the aquifer into the stream; streams are, therefore, sites of ground water discharge. However, under certain conditions, if enough water is drawn from the aquifer by pumping, the normal flow is reversed and water travels from the surface water body to the aquifer.

To protect stratified drift aquifers from contamination, it may be necessary to regulate land use not only over the aquifer but also in adjacent upland areas and in at least parts of the upstream drainage areas of adjacent streams. These three recharge areas are being mapped by consultants to the 208 Program.

The Connecticut 208 Aquifer Protection Program is designed to help communities implement local ordinances that would regulate or prohibit land uses which could contribute polluted water to critical aquifers. These ordinances would address potential sources of contamination, such as road salt storage sites, landfills, septage lagoons, underground storage of fuel oils and gasoline, high densities of septic tanks, and certain industrial activities.

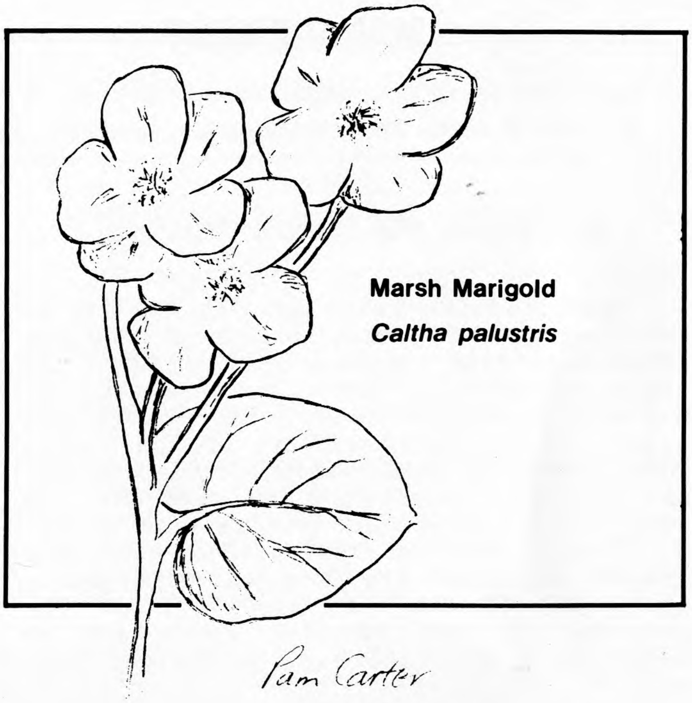
Trailside Botanizing

by G. Winston Carter

This beautiful spring flower with its brilliant cup-like blossom blooms from April to June. It looks much like a buttercup, but the flower is much larger. They both belong to the same primitive plant family (Ranunculaceae) which is characterized by often having petal-like sepals. This is true of the marigold whose yellow sepals drop off rather early. The presence of numerous stamens and pistils is another indication of its degree of primitiveness. More highly developed flower families have far fewer stamens and pistils.

The species name for the marsh marigold, or cowslip as it is sometimes called, is palustria which in Latin means "of the swamps." Some earlier writers may have been using the words marsh and swamp interchangeably when writing about this plant, but this is not accurate. A marsh is a treeless form of wetland with the prominent vegetation being grasses and sedges, while a swamp is characterized by moss, shrubs, or trees, with swamp red maple often being one of the types of trees. The marsh marigold may be observed along brooks and in swampy areas which seem to be its typical habitat. The name marigold is believed to have originated from its use in Medieval church festivals which were dedicated to the Virgin Mary.

The marigold's leaves are rounded or kidney-shaped and are considered delicious as a cooked green. The leaves are poisonous if eaten uncooked. They should be boiled thoroughly before eating. This removes the two poisonous alkaloids that are present in the fresh leaves. The leaves are rich in iron and used to be used to treat anemia. The flower buds can also be eaten after being boiled.



Marsh Marigold
Caltha palustris

DEP citizens' bulletin

State of Connecticut
Department of Environmental Protection
State Office Building
Hartford, Connecticut 06115

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